



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/944,947	09/01/2001	Wu-Niang Feng	1641008	2762

7590 06/28/2004

Keith Kline
PRO-TECHTOR INTERNATIONAL SERVICES
20775 Norada Court
Saratoga, CA 95070-3018

EXAMINER

DUONG, THANH P

ART UNIT	PAPER NUMBER
----------	--------------

1764

DATE MAILED: 06/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

1/2

Office Action Summary

Application No.

09/944,947

Applicant(s)

FENG, WU-NIANG

Examiner

Tom P Duong

Art Unit

1764

20

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Bartz (5,603,905). Bartz discloses a semiconductor waste-gas treating apparatus (Fig. 3) having the ability of preventing sedimentation and etching of filth (Col. 5, lines 38-40), said apparatus comprises a header (steel plate 41 supporting tubes 42 and 44) and a waste gas treating trough (51) mounted below said header and having at the center thereof a reaction room (31), and is characterized by: said reaction room is surrounded by a water receiving chamber outside (51) of it, said water receiving chamber is provided on the top thereof with an annular spillway (wall between 50 and 51) in communicating with said reaction room (31), water in said smoothly and uniformly distributed to said water receiving chamber is annular spillway, and spills to said reaction room to form an annular water wall on the wall of said reaction room.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1764

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2-3 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartz '905 in view of Haldeman (2,545,028). Regarding claim 2, Bartz discloses all the limitations as described in claim 1, above but fails to disclose annular guide is mounted at the annular spillway. Haldeman teaches the annular guide (centrally disposed tube 16) located interior of the cylinder 2. The tube 16 facilitates the movement of the fluid in a circular path, which increases the fluid net velocity (Col. 5, lines 17-25). Thus, it would have been obvious in view of Haldeman to one having ordinary skill in the art to modify the waste gas apparatus of Bartz with an annular guide as taught by Haldeman in order to increase the velocity of the water moving downstream, which aids in cleaning and/or prevent the deposition of particulates on the inner wall. Regarding claim 3, Bartz discloses a water receiving chamber 51 with a water inlet (52) and water discharge outlet (55). Regarding claim 8, Bartz discloses a annular spillway (wall between 50 and 51) with no sensing probe. Regarding claim 9, Bartz fails to disclose the annular guide is provided on the top with annular flange. Haldeman teaches the annular guide (centrally disposed tube 16) is threaded to the top flange (plate 14) and the annular guide (tube 16) is supported by the top flange (plate 14). Thus, it would have been obvious in view of Haldeman to one having ordinary skill in the art to modify the waste gas apparatus of Bartz with an annular guide with supporting top flange as taught by Haldeman in order to provide supporting structure for the annular guide.

3. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over the applied references (Bartz '905 in view of Haldeman ' 028) as applied to claim 2, above, and further in view of Kleeberg et al. (4,304,570). The applied reference above fails to disclose a sensing probe in the annular spillway to detect the water level in the water receiving chamber. Kleeberg teaches the a sensing probe (level sensor 22) mounted in the chamber 8 to detect the liquid scrubbing level in the vessel. Thus, it would have been obvious in view of Kleeberg to one having ordinary skill in the art to modify the waste gas apparatus of the applied references with the sensing probe as taught by Kleeberg to detect the scrubbing liquid level in the reaction chamber.

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the applied references (Bartz '905 in view of Haldeman ' 028) as applied to claim 2, above, and further in view of Shular (3,881,874). The applied references fails to disclose a header is provided with a sensing probe to sense the reaction temperature in the reaction room. Shular teaches the temperature sensing probes 40-43 are located in the combustion chambers H and I to measure the temperature of the reaction. Thus, it would have been obvious in view of Shular to one having ordinary skill in the art to modify the waste gas apparatus of the applied references with sensing probes as taught by Shular in order to provide means for measuring the temperature in the gas chamber.

Art Unit: 1764

5. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over the applied references as applied to claim 5, above, and further in view of Suttrop (6,267,585). The applied references in claim 5 disclose the claimed invention except a plurality of hydrogen spraying nozzle with a fire spraying port. Suttrop teaches it is conventional to provide hydrogen injection nozzles with vortex spraying mechanism and such configuration maximizes the flame area or burning surface area in the combustion chamber (Col. 2, lines 26-44). Thus, it would have been obvious in view of Suttrop to one having ordinary skill in the art to modify the waste gas apparatus of the applied references with a hydrogen spraying nozzles as taught by Suttrop in order to maximize the burning area in the combustion chamber.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom P Duong whose telephone number is (571) 272-2794. The examiner can normally be reached on 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1764

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Duong
June 24, 2004

TD



Glenn Caldarola
Supervisory Patent Examiner
Technology Center 1700